

B smart & say NO to Heart Disease & Diabetes

You probably have never heard of Nitric Oxide before but it plays such an important role in your overall health I had to bring it to your attention.

Nitric Oxide (NO) is a gaseous signaling molecule. It is found/made in the arteries. In young people it is made in abundance. In people over 40 years of age it is found to be decreased to significantly lower levels. They just don't make as much as the younger people do.

What is a signaling molecule?

A **signaling molecule** is a chemical involved in transmitting information between cells. It is made in one cell and released to be drawn into nearby cells to trigger an activity or action.

In this case the NO is released, from the lining of the arteries, to signal the surrounding smooth muscle fibers of the arteries to relax and allow the artery to dilate.

This allows increased blood flow in the area. The effects of nitric oxide are widespread throughout the body including but not limited to blood vessel dilation.

The signaling effects of NO happen in less than a second. Then the molecule is gone. It doesn't last very long but young people make lots of it so they never seem to run out of it as they need it.

As we get older we don't produce as much and we begin to have changes in our health as our NO levels drop year after year.

Here are some of the damaging effects of low nitric oxide levels:

Plaque - cholesterol builds up on the lining of arteries.

Chronic inflammation & oxidation form in the walls of the arteries.

Blood clots from plaque can form & be released into the blood stream. (Stroke)

An increased risk of *sudden cardiac death* occurs.

VLDL very low density cholesterol sticks to the walls of the arteries

Studies showed that:

Those 30 years & younger had the best blood flow in their forearm. (This is where they test to determine artery blood flow)

Those 31 to 45 years of age had an 11% decrease in blood flow.

Those 46 to 60 years of age had another drop of 13% blood flow.

Those over 60 years of age experienced an additional 28% decrease in blood flow.

That is a grand total of 52% less blood flow in those over 60 years of age.

Having a low level of nitric oxide causes less artery dilation which raises blood pressure and restricts blood flow in your extremities and heart?

Well, Nitric Oxide isn't just about improving blood flow it also has other significant benefits.

In osteoarthritis the cartilage wears away and allows bones to painfully rub together.

The connective tissues breakdown and become inflamed and painful.

The type of drug people often take for this pain is over the counter pain killers. It is known that taking these drugs decreases our production of NO. The more we use the drugs the less NO we make and the more damage to the joints we have.

NO reduces the damage so they said in the 2010 journal *Osteoarthritis and Cartilage*.

A nitric oxide enhancing supplement, along with a B-complex, does these things for our body:

It increases nitric oxide production regardless of age or condition.

It sustains nitric oxide levels for 8 – 12 hours.

It improves absorption of other supplements & nutrients in aging adults.

It increases blood flow, in the heart, by relaxing blood vessels & improves blood vessel permeability & it increases the heart muscle contractions.

It lowers blood pressure because of the improved blood flow & relaxed arteries. In the lungs & respiratory system increases relaxation of the bronchia's for easier breathing.

Increases cancer cell death (apoptosis).

It increases angiogenesis or new blood vessel growth.

Men experience an improvement from erectile dysfunction.

Helps calm the nerves in your extremities.

Helps with learning, memory, prevents nerve damage.

Improves gastric motility & improves nutrient absorption.

It improves the fight against viruses.

Improved circulation increases oxygen availability during & after workouts in older adults.

Nathan Bryan, Ph.D.

Nitric Oxide & Diabetes: Clinical diabetes mellitus is a syndrome of disordered metabolism with inappropriate

hyperglycemia, due either to an absolute deficiency of insulin secretion or a reduction in the biologic effectiveness of insulin (Type II diabetes) or both. Type II diabetes mellitus accounts for 80-90% of diabetes cases in the US and is associated with an increased risk for a number of life-threatening complications. These include heart disease and stroke, high blood pressure, blindness, kidney disease, nervous system disease, amputation, and complications of pregnancy and surgery. Probably not coincidentally, all of the above complications are associated with insufficient nitric oxide (NO) production. Medical science has now established that NO is not only the key link between metabolic disorders like diabetes and CVD but also the underlying *cause* of insulin resistance and metabolic syndrome. Without adequate NO production, insulin cannot signal cells to take up glucose and clear it from the bloodstream, thereby causing hyperglycemia (Diabetes) and hyperinsulinemia (Insulin resistance). This is the first step in the development of type 2, insulin resistant, diabetes. Restoring NO production can not only correct insulin signaling, it can also protect the patient from the cardiovascular complications from diabetes.

Implementing strategies to restore NO production should have a profound impact on diabetes, metabolic syndrome and cardiovascular disease.

Dr. Janet Zand, L.Ac. O.M.D., chief technical officer, Neogenis Labs says that people can take steps to promote Nitric Oxide production and availability within

their bodies. “While scientists and medical experts seek disease cures, people can take important steps to potentially prevent disease by making lifestyle choices that support the body’s production of Nitric Oxide,” Zand said. “Nitric Oxide can be generated by consuming foods such as green leafy vegetables, beets and celery and get regular exercise.”

Common foods with Nitric Oxide generating capacity include:

- **Very high** (>250)
Celery, cress, chervil, lettuce, red beetroot, spinach
- **High** (100-<250)
Celeriac, Chinese cabbage, endive, fennel, kohlrabi, leek, parsley
- **Middle** (50-<100)
Cabbage, dill, turnip, Savoy cabbage
- **Low** (20-<50)
Broccoli, carrot, cauliflower, cucumber, pumpkin, chicory
- **Very low** (<20)
Artichoke, asparagus, broad bean, eggplant, garlic, onion, green bean, mushroom, pea, pepper, potato, Summer Squash, sweet potato, tomato, watermelon.

Exercise

Vibration exercise increases circulation, which can improve oxygen levels in the muscles and increase muscle mass.

For an explanation & demonstration of the simple vibration exercise techniques go to

www.drjerry.weebly.com

Click on the “Old Geezers” page.

Nerve pains & B –Vitamins!

Many suffer from diabetic neuropathy with pain in their legs and numbness and tingling in their fingers and toes.

Surgeries and accidents also cause nerve damage leaving many to suffer for years with little or no healing to bring relief.

B – Vitamins play an important role in the healing process for nerves.

The toes feel numb and the feet have a burning sensation; the leg muscles become sore and the calf muscles cramp.

Other symptoms occur like motion sickness, eyes become sensitive to light, burning tongue, mouth sores, weak heart, being irritated easily, don’t remember dreams or don’t dream at all, migraine headaches, mental fatigue, nerve degeneration and a host of other symptoms.

Getting a good B –Complex will go a long way in improving your nervous system.

Coconut Oil

Alzheimer’s, epilepsy, Parkinson’s syndrome, ADD, ADHD and many other brain related diseases are helped by taking 3 or more tablespoons of coconut oil everyday. My web site has a link to a video about coconut oil and Alzheimer’s on the “Hot Topics Health-Tips” page.

Information provided by:

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House –Calls only
Groups welcome!